GENETICS

A PERIODICAL RECORD OF INVESTIGATIONS
BEARING ON HEREDITY AND VARIATION

Founded in 1916
by
GEORGE H. SHULL
with the cooperation of

WILLIAM E. CASTLE
EDWIN G. CONKLIN
CHARLES B. DAVENPORT
BRADLEY M. DAVIS
EDWARD M. EAST
ROLLINS A. EMERSON
HERBERT S. JENNINGS
THOMAS H. MORGAN
RAYMOND PEARL

VOLUME 69—SEPTEMBER–DECEMBER 1971

GENETICS VOLUME 69, September–December 1971

EDITORIAL BOARD

ERNST W. CASPARI, *Editor*
University of Rochester

ERNEST H. Y. CHU (1975)
Oak Ridge National Laboratory

C. CLARK COCKERHAM (1972)
North Carolina State University

ROWLAND H. DAVIS (1975)
University of Michigan

GERALD R. FINK (1974)
Cornell University

PHILIP E. HARTMAN (1974)
The Johns Hopkins University

ARMIN D. KAISER (1973)
Stanford University

RICHARD C. LEWONTIN (1973)
University of Chicago

DAN L. LINDSLEY (1971)
University of California at San Diego

OLIVER E. NELSON (1973)
University of Wisconsin

TIMOTHY PROUT (1974)
University of California at Riverside

CHARLES M. RICK (1972)
University of California at Davis

ELIZABETH S. RUSSELL (1975)
The Jackson Laboratory

DAVID SCHLESSINGER (1973)
Washington University

FRANK STAHL (1971)
University of Oregon

J. HERBERT TAYLOR (1972)
Florida State University

Copy Editor, LUZ S. TEICHER
Editorial Assistant, VIVIAN M. DEAN
Business Manager, WALTER E. NEAL
Assistant Business Manager, HELEN STIKELEATHER

PUBLISHED AT AUSTIN, TEXAS
by the Genetics Society of America
Printed at the University of Texas Printing Division, Austin

AUTHOR INDEX

To Volume 69, September–December, 1971

Abe, M., 1

Bahr, G. F., 123
Ballantyne, G. H., 179
Barr, H. J., 119
Bischoff, W., 453
Bloom, S. E., 479
Bonner, M., 409
Borgaonkar, D. S., 123
Bradford, G. E., 499
Brncic, D., 227
Budnik, M., 227
Burns, J. A., 211
Buss, E. G., 479

Cain, K. T., 17
Carlson, P. S., 261
Carlton, B. C., 133
Chao, S. E., 29
Chinnici, J. P., 71, 85
Chovnick, A., 179
Cockerham, C., 235
Curtis, C. F., 97

Darcey, K. M., 479
Davies, R. W., 353, 363
Dev, V. G., 129
Drake, J. W., 273

Ehrman, L., 63
Eicher, E. M., 267
Ellison, J. R., 119
Englesberg, E., 289
Enomoto, M., 145
Eyland, E. A., 399

Francke, Uta, 517

Gerstel, D. U., 211
Gielow, L., 289
Golomb, H. M., 123
Grell, R. F., 523
Grewal, M. S., 129
Gutz, H., 317

Holm, D. G., 179
Hooker, A. L., 115
Horn, V., 409
Hutton, J. J., 129

Ishikawa, T., 339

James, A. P., 513

Katterman, F. R. H., 435
Kimura, M., 247
Koref-Santibañez, S., 227
Kouri, R. E., 129
Kuhn, D. T., 467
Kung, C., 29

Lakovaara, S., 377
Largen, M., 289
Levings, C. S., 491
Lewontin, R. C., 405
Lim, S. M., 115
Lucchesi, J. C., 453

Middleton, R. B., 303
Miller, D. A., 129
Miller, O. J., 129
Mukai, T., 385

Nasim, A., 513
Nesbitt, M., 517

Ohta, T., 247
Olsen, M. W., 479

Perez-Salas, S., 63
Prakash, S., 405

Robinson, A. S., 97

Saura, A., 377
Scandalios, J. G., 47
Sherwin, S. A., 133
Stasiowski, S., 409
Steffensen, D. M., 163
Steinberg, C. M., 17
Stuber, C. W., 491

Toh-e, A., 339
Tomizawa, J., 1

Vodkin, M., 435
von Borstel, R. C., 17

Wada, C., 275

WIMBER, D. E., 163
WORKMAN, P. L., 353

YAMAZAKI, T., 385
YANOFSKY, C., 409
YOON, C. H., 221
YURA, T., 275

SUBJECT INDEX

To Volume 69, September–December, 1971

abortive transduction, 145
ade 6 locus, yeast, 317
allozymes, 47, 377, 405
Amy-1 locus, maize, 47
amylase, 47
Angiospermae, 435
anthranilate synthase, 133, 409
associative overdominance, 247

Bacillus subtilis, 133,
behavioral mutants, Paramecium, 29
body weight, 499
breakage, chromosomes, 211
bristle number, 363
browning, silk, corn, 491

cerebellum, cytoarchitectonics, 221
chromosome D, man, 123
chromosome effects, 353
chromosome identification, mouse, 129, 267, 517
chromosome mass, 123
chromosome replication, *E. coli*, 1
chromosome substitution, 85
chromosome variation, 119, 123
Cochliobolus heterostrophus, 115
complementation, intragenic, 453
control, phosphatase, 339
conversion, 179, 317
corn, 47, 115, 491
correlated response, 353, 363
crossing over, 71, 85, 179
cytoplasmic effects, 63

deletions, *E. coli*, 289
development, isozymes, 47
developmental time, 385
DNA polymerase mutants, 273
DNA replication, 1
DNA-RNA hybridization, 163, 435
dor, *D. melanogaster*, 453
Drosophila melanogaster, 71, 85, 163, 179, 353, 363, 385, 453, 467, 523
Drosophila obscura, 377
Drosophila paulistorum, 63
Drosophila pavani, 227
Drosophila persimilis, 405
Drosophila pseudoobscura, 405
Drosophila simulans, 119

Escherichia coli, 303
Escherichia coli B/r, 289
Escherichia coli K12, 1, 275, 409
evolution, bacterial chromosome, 303

F factor, replication, 275
fd chromosome, mouse, 129
fine structure, *dor* locus, 453
fitness, 97, 227
fitness, components, 227, 385
flagella, Salmonella, 145
flavonoid synthesis, 491
fourth chromosome, *D. melanogaster*, 523

gene dosage effects, 47
growth rate, 499

Helminthosporium maydis, 115
heterochromatin, 211
heterosis, 247
homology, genetic, 303
Homo sapiens, 123
hybridization, r-RNA-DNA, 435
hybrids, *E. coli*/Salmonella, 303
hybrids, semispecies, 63

I^c mutations, *E. coli*, 289
identity by descent, 235
inbreeding, 235
InGP synthetase, 409
inhibitors, chromosome breakage, 211
initiation, DNA synthesis, 1
initiator constitutive mutants, 289
in situ RNA-DNA hybridization, 163
interaction, neurological mutants, 221
intragenic recombination, 179, 317
inversions, 227, 405
isozymes, 47, 377

L arabinose operon, 289
linkage disequilibrium, 363
linked exchange, 179
litter size, 499
location, polygenes, 363

maf, *E. coli*, 275
maize, 47, 115, 491
male sterility, 63, 97

Man, 123
map, *fla–mot* region, Salmonella, 145
maternal effects, 63
megachromosomes, 211
Meleagris gallopavo, 479
MORAN's Island migration model, 399
mosaics, yeast, 513
motility Salmonella, 145
mouse, 129, 221, 267, 499, 517
Mus musculus, 129, 221, 267, 499, 517
mutation, 17, 29, 261
mutations, polygenes, 385
mutator genes, 17

neurological mutants, mouse, 221
Neurospora crassa, 339
neutral mutants, 247
Nicotiana spp., 211
nuc mutants, 339
nucleotide sequence, r-RNA, 435

oogenesis, 479
operon, 409
overdominance, 247
ovulation rate, 499

Paramecium aurelia, 29
parthenogenesis, turkey, 479
pathogenicity, 115
pest control, 97
phage T4, 273
phenethyl alcohol resistance, 275
phenoloxidase, 491
phosphatases, Neurospora, 339
polar mutants, 409
polygenes, 85
polymorphism, 227, 377, 399
populations, experimental, 227
populations, natural, 377, 385, 405
populations, theoretical, 97, 235, 247, 399
PRA-isomerase, 133
PRA transferase, 409
prenatal mortality, 499
Pt-12 locus, Drosophila, 405

quinacrine staining, 119, 129, 517

radiation sensitivity, 17
recombination, 71, 85, 179
recombination, chromosome 4, Drosophila, 523
recombination, intragenic, 179, 453
replicating instabilities, 513
replication, F factor, 275
reproduction, mouse, 499
restoration, chromosome number, 479
RNA, ribosomal, 435
RNA-DNA hybridization, 163
ry, Drosophila, 179

Schizosaccharomyces pombe, 317, 513
Saccharomyces cerevisiae, 17
salivary gland chromosomes, 119, 163
Salmonella typhimurium, 145, 303
satellite, 123
selection, 71
selection artificial, 353, 363
selection, mutants, 29, 261
semispecies, 63
sensitive period, heat, crossing over, 523
sex ratio, 467
Southern corn leaf blight, 115
super suppressors, 17
suppressors, nonsense, 133

t-RNA loci, Drosophila, 163
temperature, 1, 227
temperature, effect on recombination, 523
temperature sensitivity, *E. coli*, 1
Tetrahymena pyriformis, 261
toxin production, 115
translocations, 97, 129, 267, 517
trp operon, *E. coli*, 409
trp mutants, *B. subtilis*, 133
tumorous head, 467
turkey, 479
T4 phage, 273

viability, 385

yeast, 17, 317, 513

Zea mays, 47, 115, 491